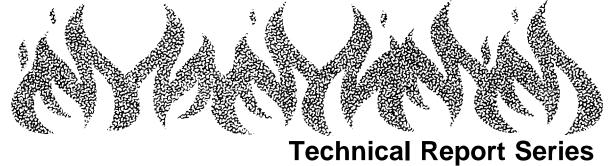
United States Fire Administration



College Dormitory Fires in Dover, Delaware and Farmville, Virginia



Federal Emergency Management Agency



United States Fire Administration
National Fire Data Center

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College Dormitory Fires in Dover, Delaware and Farmville, Virginia (April 12, 1987 and April 28, 1987)

Investigated by: Daniel J. Carpenter, Jr.

This is Report 006 of the Major Fires Investigation Project conducted by TriData Corporation under contract EMW-86-C-2277 to the United States Fire Administration, Federal Emergency Management Agency.



Federal Emergency Management Agency



United States Fire Administration

National Fire Data Center

COLLEGE DORMITORY FIRES IN DOVER, DELAWARE AND FARMVILLE, VIRGINIA

Overview

The potential threat of college dormitory fires is often not taken seriously enough by students until it is too late. Campus authorities and students sometimes let their guard down because of the high frequency of pranks and false alarms.

On April 12, 1987, in Williams Hall of Wesley College, Dover, Delaware, and on April 28, 1987, in Frazer Dormitory of Longwood College, Farmville, Virginia, fires occurred that killed one student and injuried 19. While the fires differ, they have several important aspects in common.

Smoke bombs caused the Wesley College, Delaware fire in which an 18-year-old student died and four students were injured, one critically. Incidents involving smoke bombs had occurred before, and students apparently thought the smoke this time " was just another smoke bomb." As a result the fire department was not immediately notified.

There had been frequent false alarms, and students considered them annoying. The fire alarm in the dormitory did not operate on the day of the tragic fire, apparently because the fire alarm bell had been stolen from the first-floor hallway after a false alarm the previous day.

When someone did call for help, the call went to the Dover police department on its regular phone number, instead of to the fire department via the 911 emergency number, further delaying the response.

Delayed notification of the fire department also characterized the Longwood College, Virginia dormitory fire. The call to the Farmville Volunteer Fire Department was relayed through the Campus Police Department; the 911 emergency number was not used.

The Longwood College fire, which was apparently caused by an unauthorized overloaded, multi-outlet extension cord, injured 15 students. As in the Wesley College incident, the fire alarm failed to work. In this case, activation was delayed about 10 minutes because the breaker switch was off. In addition, the majority of in-room smoke detectors were disconnected or failed to operate.

Similar to those at Wesley College, the Longwood College students apparently did not evacuate immediately because they thought it was "just another fire drill."

Both these incidents point up the importance of enforcing fire safety policies and procedures in dormitories and encouraging use of the 911 emergency number for reporting emergencies to appropriate authorities.

Gathering information for these reports was somewhat restricted by the criminal and civil investigations at Wesley College and the lack of incident reports and interviews with the fire department in Farmville.

Nevertheless, the following summary of problems emerged:

SUMMARY OF KEY ISSUES

| Issues | Longwood College Farmville, Virginia | Wesley College Dover, Delaware | Comments |
|-------------------|---|-----------------------------------|---|
| Cause of Fire | Overloaded circuit | Smokebomb prank | Both avoidable by proper student behavior. |
| Smoke Detectors: | | | |
| Room of origin | Present but did not work | No detectors | Lack of maintenance and vandalism by students (Longwood). |
| Other rooms | Present; about 85% inoperative | No detectors | Should be operational in all dorm rooms. |
| Alarm System | Failed | Failed | One vandalized, the other accidentally turned off. |
| Sprinklers | None | None | Dormitories built prior to code requirement for sprinklers. |
| Evacuation | Delayed | Delayed | Lack of student belief of a real fire. |
| F.D. Notification | Delayed | Delayed | Calls went to local or campus police before fire dept. 911 number not used. |

SUMMARY OF KEY ISSUES (Cont'd)

| Issues | Longwood Farmville, | | Wesley College Dover, Delaware | Comments |
|-------------------|---|--|--|--|
| Fire fighting Pro | (camp lacked other equipn trainir respon | responder pus police) d air pacs, needed nent and ng. First nding engine ny had empty acs. | First responder misdirected to wrong side of building. | Interior attack delayed. |
| Structural Proble | - | of self- g room | No problem | Probably contributed to smoke spread (Longwood). |

WESLEY COLLEGE DORMITORY FIRE

Dover, Delaware, April 12, 1987

Investigated by: Dan J. Carpenter

Local Contacts:

Police Department

Capt. James L. Hutchison (302) 736-7010 Lt. Boyce Failing 400 South Queens Street Dover, Delaware

Fire Department

Chief John Wilson (302) 734-3302 Bureau of Fire Robbins Hose Company 103 South Governors Avenue Dover, Delaware 19901

Inspector John W. Raughley (302) 736-7010 Department of Inspections P.O. Box 475 - City Hall Annex Dover, Delaware 19903

Walter E. Saxton (302) 736-7010 Inspections Supervisor P.O. Box 475 - City Hall Annex Dover, Delaware 19903

Wesley College

Mr. Joseph Bellmyer (302) 736-2360 Assistant to the President Wesley College Dover, Delaware 1990l

Dr. J. Thomas Sturgis (302)736-2435 Dean of Students Wesley College Dover, Delaware 19901

OVERVIEW

A tragic dormitory fire in Williams Hall at Wesley College in Dover, Delaware, occurred in the early morning hours of Sunday, April 12, 1987. It took the life of one student, critically injured another (who subsequently recovered), caused lesser injuries to three more students, -and brought fear and panic to dozens of others.

The fire started when a smoke bomb was set off in one of the rooms. This was the tragic climax of a series of similar incidents in the dormitory. Evidence of previous smoke bombs which burned hall tiles was apparent throughout the building. Lighter fluids had been sprayed on the wall and ignited, and smoke from burning candles had been used to write obscene words on the ceilings. In addition, false alarms had been frequent prior to this incident, and fire alarms were regarded only as an annoyance by many students.

CONSTRUCTION

Wesley College was founded in 1873. It is located in Dover, Delaware in a scenic rural setting. There are approximately 800 full time students and 700 part time day and evening students enrolled.

The Williams Hall dormitory was built in 1969. It is a three-story fire resistant building with brick exterior and concrete block interior, and it has a basement. Two-inch solid wood, self-closing doors are at stairways located at opposite ends of the building. Student rooms have a two-inch solid wood door with self-locking door knobs. The dormitory is designed to house approximately 180 students. It had no sprinklers or smoke detectors in each room.

Each of the college's five dormitories are equipped with a local fire alarm system on every floor. However, a fire alarm bell had apparently been removed from the alarm in the first floor hallway of Williams Hall following a false alarm during a party the morning prior to the fire, April 11. (Fire alarm bells had previously been found missing and the alarms inoperative in a fire drill in September, 1986.)

According to the fire officials contacted, the tampering with the alarms may have caused the alarm system to be inoperable at the time of the fire on the morning of April 12, 1987. Schools officials agreed, but stated that it was not possible to replace the alarm bell immediately since the original could not be found, and because it was a weekend and the alarm system company was not open. There were several other reasons as well. However, no special fire guard or other actions were taken as an interim measure.

Panic hardware equipped with an alarm device on the exit doors leading outside from the basement did functionproperly when students exited the building through these doors on the morning of the fire. It is also believed that the alarm system in an adjacent dormitory may have been activated in an attempt to alert students.

POLICIES AND PROCEDURES

Information about fire safety regulations and procedures was readily provided to the investigator by Wesley College. This included a schedule of fire drills, fire safety precautions to be observed by students, and procedures to be followed in the event of a fire. False alarms are counted toward meeting the number of fire drills required per month.

A residence director is assigned to each dormitory and is assisted by two other resident assistants (R.A.'s)on each floor. At no time are the resident director or assistants permitted to leave the building unattended. The name of the duty R.A. is posted to insure that someone in authority is available in the event of emergency. There were four R.A.s in the dorm at the time of the fire.

While it appears that the policies and rules of conduct were in place to insure a reasonably fire safe environment, it is also apparent that these rules were not fully enforced. Interviews with college and fire officials indicated a supreme concern for what was regarded as each student's individual rights. The dormitory was considered to be a student's home, and officials seemed reluctant to enforce rules which would

put the needs of the total resident population ahead of the "rights" of the individual to determine his/her own behavior within his/her home.

THE FIRE

On the morning of February 12, 1987 a telephone call was received at approximately 0233 on the house phone by the radio dispatcher at-the Robbins Hose Company #1, advising the department of a fire in the Williams Hall dormitory at Wesley College. The call was relayed by an answering service which takes calls for the department after hours.

The Robbins Hose Company #1 is a well-established volunteer fire department supported by a paid staff which includes dispatchers, fire prevention inspectors and investigators.

Before the fire department had been called directly, notification of a fire had been transmitted to the Dover Police Department dispatcher who also relayed it to the fire department. The call had come in on regular police lines rather than the 911 emergency number. According to the police, this was due to the fact that the 911 emergency number had only been in effect for approximately two years, and "some people are accustomed to just dialing the police department on the regular police phone number."

Fire officials determined later that the calls to the police and fire departments had been delayed for some time. Initially, building occupants did not realize there was a fire even though there was smoke. Most believed it was "just another smoke bomb being set off."

Once an actual fire was discovered, students said they attempted to, alert everyone in the building, but because of self-locking doors on the individual rooms, they were unable to determine which of the rooms were occupied.

Because of the magnitude of the fire, and the possible extent of rescue which could be involved, a second alarm was called soon after arrival of the first unit. A total of 10 units and 41 firefighters responded.

Ironically, all dormitories except Williams Hall had been pre-fire planned. Because of the similarity among the dorms, the pre-fire plans for the other buildings assisted fire fighters in their rescue attempts and fire fighting operations. However, a further delay was caused by misinformation received by the first arriving units at the scene. They were directed to the rear of the building, from which smoke could be seen, but the actual area of origin turned out to be at the front of the building.

The body of 18-year old Christopher T. Steven was found in Room 220 during the firefighters' initial search of the building. He had died of smoke inhalation. Later, at approximately 0330, firefighters discovered a second victim who was still alive, located in Room 217. Both of these victims were at the opposite end of the dormitory from the room of origin, a distance of approximately 175 feet. The second (alive) victim was covered with a blanket and found hidden under a desk. When questioned by investigators, he stated that he had attempted to leave the building but became confused and disoriented. He therefore returned to his room, closed the door, and hid under the desk in an attempt to avoid the fire. Because of his concealment, he had not been discovered during the initial search by the firefighters and was not discovered until almost an hour after the fire was reported to the Fire Department.

Damage from the fire is estimated at more than \$100,000.

LESSONS LEARNED AND RECOMMENDATIONS

1. Vandalism of fire safety systems and pranks involving the setting of fires simply cannot be tolerated by colleges. Students need to be made to understand the dangers from fire, and the school and criminal penalties they may face for mischief.

Concern for students individual rights to privacy and self expression is fine, but there must also be recognition and protection of the right of all students who share a building to live in a fire safe environment. Student orientation programs should spell out strict disciplinary measures to be taken when infractions of college safety procedures occur, and they should be enforced consistently.

- 2. The advantages of the 911 reporting procedures should be thoroughly explained and utilized. Any delay when an emergency is known to exist should be thoroughly investigated to determine cause and the necessary action to be taken to avoid the problem in the future.
- 3. Precautions regarding criminal and civil investigative procedures are important in cases such as this. Two students who lived in Williams Hall were initially charged with manslaughter in this incident. Although those charges were later reduced to misdemeanors, close coordination of all agencies and indivi duals involved is needed if a successful conclusion to the cases is to be reached. Investigating agencies must coordinate information gathering, investigation, and obtaining and safeguarding physical evidence. Generally the fire departments should have prime responsibility for cause determination and gathering of evidence to support a determination of an incendiary fire or set fire.
- 4. The local alarm systems in the dormitories need to be inspected and/or tested several times during the school year, espailly to check for vandalism.
- 5. Students need to be informed of the proper number to call when a fire is seen -- usually 911. They also need to be informed of the types of equipment and practices that are outlawed in dormitory rooms.
- 6. Sprinkler systems should be retrofit in mutiple occupancy dwellings whenever possible. Smoke detectors should be provided in every room and in hallways.

Appendices

Wesley College, Dover, Delaware Fire

- A. Dover Fire Department Incident Report, including dormitory layout and apparatus deployment diagrams.
- B. Wesley College's campus police incident report.
- C. Wesley College Fire Safety Regulations and Procedures.
- D. Slides of Wesley College fire, with sketches of where #1 #16 were taken (with USFA master file copy only).
- E. Pictures of Wesley College fire.

BUREAU OF FIRE DOVER DE.

ÆRUSH 9 ÆAR 15 10

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BUREAU

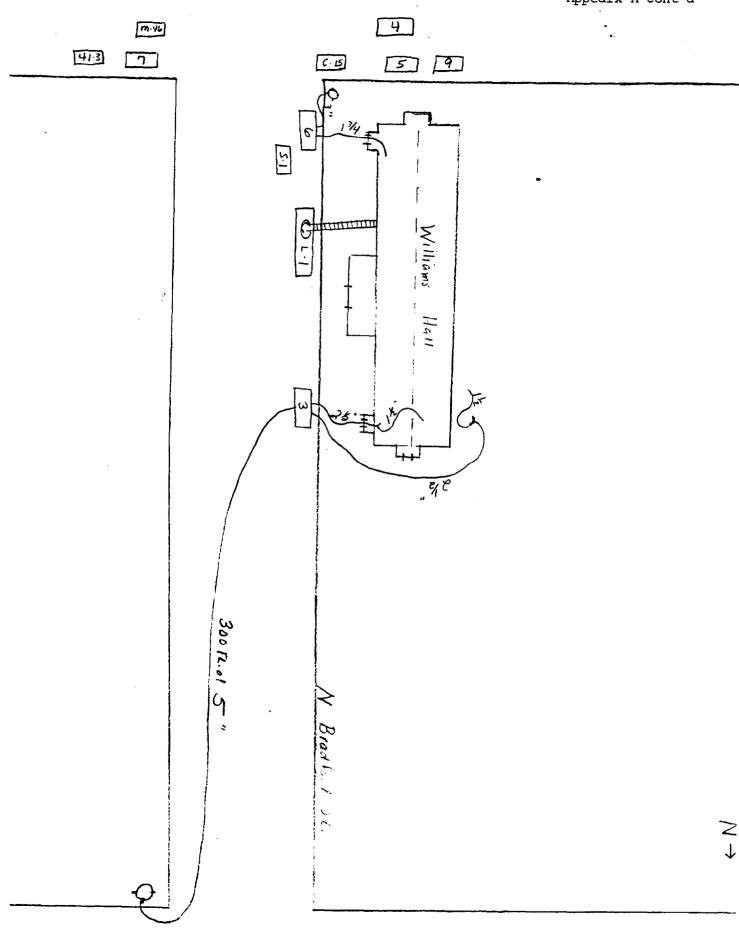


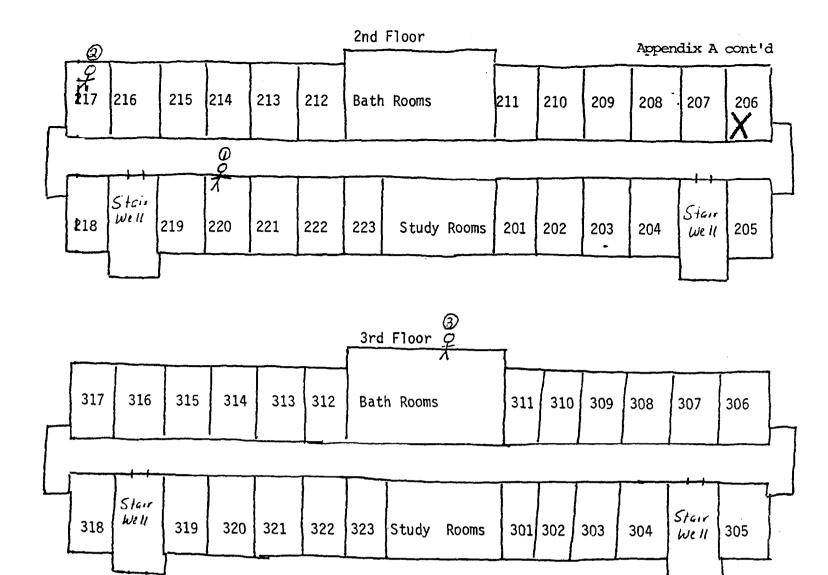
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| Miles to scene, one way / Time under control / H. 27 M. Attendance, on scene / Total miles traveled / (At least 1 mile) Total time in ser. 3 H. 14 M. Total attendance | | | | | | | |
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| | | ssion | OIC | Driver(s) | | | |
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| .adder-1 | | scue 🗆 Ladder pipe Service 🗆 Other | T. Whitham (16) | Frt. J. Hurlig Tir. G. Alderson | | | |
| □ Engine-2 | | /ater □ Wagon □ Other | | | | | |
| □ Ladder-3 | ☐ Service Aerial | ☐ Ladder pipe Service ☐ Other | | • | | | |
| Engine 3 | | /agon □ Water □ Other | E.Baker | L. Osika | | | |
| Engine-4 | □ Wagon □ | Pump Water Service Other | J. Hurd | A. Moure | | | |
| Tender-5 | ☐ Hose ☐ Maste | streams | D. Louie | E. Moore | | | |
| Engine-6 | Wagon □ □ Service | Pump Water Other | C. Boyer (17) | H. Pusey | | | |
| ✗ Engine-7 | | Pump □ Water Ya Other | W. Hurley (19) | C. Carry Sr. | | | |
| □ Engine-8 | ☐ Pump ☐ F | ose Service | | | | | |
| Brush-9 | ☐ Field Piece ☐ | Manpower 🖫 Other | | F. Sapp | | | |
| □ Boat | □ Rescue □ | Service Other | | | | | |
| □ Foam Trl. | | | | | | | |
| ₫ Car | Command Post Service | ☐ Manpower ☐ Invest. | J. Willson (15) | 5/4 | | | |
| Equipment use | | used - Feet | Ladders raised - Ft. | Gals. of water 1,500 | | | |
| ☐ Air bags Air masks - | | /00 | Aerial — 700 Bangor — 700 Wall — 700 | Gals. of Hi-X -0- | | | |
| ☐ First aid equ | 1¾" t. 2½" | 250 | | ——— Gals. of 6% - U - | | | |
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| Ø generators □ hurst tools | 4.1001 5" | 300 | Collp | Gals. of Protein - 0 - | | | |
| □ K-12 saws . | | er Streams Used | Step to Straight | No. of Hydrants 2 | | | |
| ☐ ladder pipe: ☐ salvage eqt | · | | Total Pt. | Total Tank Water - 0 ~ | | | |
| sal. covers | La | d. 3 🗆 Eng. 7 | Salvage cove | ers left Extinguisher Used | | | |
| winchesOther Equip. | . C Er | * | Port. Pum @ scene | ps left | | | |
| Officers present 🕱 15 🕱 16 🕱 17 🗆 18 🕱 19 🕱 20 | | | | | | | |
| Police officers at scene C.I. Capt. Hutchinson, Cpt. Stallings Dover P.D. Del. State | | | | | | | |
| Utilities at scene | | | | | | | |
| Misc. officials | Misc. officials at scene College Security, Cullege Maintennee, Dr. Reed Stewart | | | | | | |
| Alarm taken by Robert C. Tarburton | | | | | | | |

Appedix A cont'd





X - Fire Origin

- 1.) DOA.
- 2.) Unconscious Victum
- 3.) Unk. male rescued by F.D. ladder from rear 3rd floor Window

Williams Hall floor plan (2nd & 3rd floors) Wesley College

WESLEY COLLEGE OFFICE OF THE DEAN OF STUDENTS STAFF REPORT

| | | 211 | |
|-------|---------------|------------|-----------------------------|
| FROM: | Randy Johnson | Vanholdham | TO: Dr. J. Thomas Sturgis |
| | Williams Hall | | DATE: <u>April 12, 1987</u> |
| DE. | Fire Alarms | | _ |

At 1:20 am, Saturday, April 11, 1987 the fire alarm sounded. Steve MacGlashan and myself left the office area and headed to the third floor. I stopped at the second floor to check that area. There were people in the hallway but no one seemed to be going to the exits. There was no sign of fire or smoke, however, the alarm was pulled on this floor. Steve and myself proceeded, to the third floor (which also showed no signs of fire) and began knocking on each door with the purpose of clearing the building. After clearing the third floor, we began the same process on the second floor. During this period, the security guard (Russell Pleasanton) asked for my permission to turn off the alarm. I denied his request until the building-was completely checked. At that the security guard to turn off and reset the alarm time, I told and he proceeded to do so. Approximately 1:40 am the process was completed. At 3:30 am, I was informed by Russell (security quard) that a bell had been stolen from the north end of the first floor hallway.

| DEFENDED TO: | DATE. |
|--------------|--|
| REFERRED TO: | DATE: ———————————————————————————————————— |

| WESLEY COLLEGE INCIDENT REPORT | Appendix B cont'd |
|---|-------------------|
| Location of WILLIAMS HALL 2 Time of Incident Incident Floor NORTH END. Time of Discovery | |
| Description of Incident: (Including Seriousness of Property Regulations Violated, Extent of Po | • • |
| FIRE ALARM PULLES IN WILLIAMS HALL, 200 FLOOR NORTH | Cv3. |
| HELPED RD AND RA'S TO EVALUATE BUILDING. Africa AC | |
| EVACUATED. FIRE ALARM ON 200 FLUSAL NOWIN END | WAS |
| REST AT DIBO HOURS. | |
| Persons Involved: (Witnesses, Offending Parties, Offended Pa | rties) |
| Seconity | |
| | |
| Person (s) Notified of Incident: | |

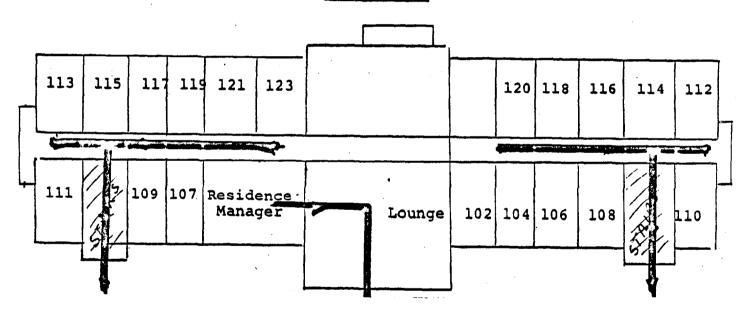
Date:

APR 87

TAMPERING WITH FIRE ALARM, FIRE EXTINGUISHERS AND RELATED FIRE EQUIPMENT WILL NOT BE TOLERATED AND WILL RESULT IN IMMEDIATE COLLEGE DISCIPLINARY ACTION, AS SOON AS THE CITY FIRE MARSHALL IS NOTIFIED THE FALSE ALARM IMMEDIATELY BECOMES EITHER A CITY OR STATE OFFENSE OR BOTH, RESULTS OF THE CITY FIRE MARSHALL'S INVESTIGATION MAY RESULT IN CRIMINAL PROSECUTION OF THE INDIVIDUAL(S) INVOLVED IN ADDITION TO ANY COLLEGE DISCIPLINARY ACTION

Fire Evacuation Route

FIRST FLOOR



WESLEY COLLEGE FIRE SAFETY REGULATIONS AND PROCEDURES

A. Fire Safety Regulations

- 1. Smoking is not permitted in specific areas on the campus.
- 2. Smoking in bed is not permitted.
- 3. Hot plates, coffee pots and toasters are not permitted in residence hall rooms.
- 4. Excessive use of extension cords is prohibited.
- 5. Only approved electric lighting is permitted in student rooms.
- 6. Stairway fire doors must remain closed at all times.
- 7. Residents are responsible for maintaining clean rooms at all times.

B Fire Alarms and Fire Drills

- 1. Any time a fire alarm sounds in a residence hall, it must be responded to promptly and efficiently. It is imperative that all persons react as if there is a fire. Never assume it is a false alarm. Prompt responsible action will result in minimizing or preventing injury to persons in the building and damage to equipment.
- 2. Fire alarms will be tested monthly by College officials. Students must evacuate building during testing unless advance notification of-the test is posted.
- 3. Fire drills will be conducted at specified times. Students are required to evacuate the hall during these drills. Students must respond in the same responsible manner they would for an actual fire.
- 4. Tampering with fire alarms, fire extinguishers and related fire equipment will not be tolerated and -will result in immediate College disciplinary action.

C. Procedures in Event of Fire or Fire Drill

- 1. The first person discovering the fire should pull the nearest alarm and immediately report to the Residence Director.
- 2. All students should immediately evacuate building in a rapid, calm, and orderly manner. If possible each student should ensure that their room door is open, lights on, windows closed and blinds raised.
- 3. After leaving the building, students should report to the following areas and remain there until given additional instructions by the Residence Director and/or other College or City fire officials. Students may not re-enter the building until permission is granted from the College official in charge.

Carpenter Hall - Parking lot behind Dulany Hall.

Williams Hall - Slaybaugh Hall lawn across street.

Budd Hall - Parking lot across from Budd Hall.

Cecil Hall - Tennis courts behind gym.

Gooding Hall - Cannon Hall lawn across street.

(In event of inclement weather, other areas of assembly will be designated).

- 4. Resident Assistants should be the last person to leave the floor and should verify that all students have left by checking rooms and closing doors behind them. Resident Assistants should then report to the assembly area, account for all persons on their floor and report to the Residence Director.
- 5. Resident Assistants should immediately check the fire boxes on their floor to ascertain if the alarm has been pulled. If it has, report this immediately to the Residence Director.
- 6. The Residence Directors, immediately upon hearing the alarm, should notify College Security for assistance. The Security Guard should report immediately to the Residence Director.
- 7. The Residence Director will not call the fire company until there is reasonable indication of an active fire, i.e., smoke, report by another person of fire to the Residence Director, personal observation of fire, etc. If, after three minutes the Residence Director has not received a direct indication of fire, an inspection of the building should be conducted.
- 8. Immediately upon reasonable determination of fire, the Residence Director will notify the fire department giving building name, address, location of the fire, type of the fire and name of the person calling. Then she will notify the Dean of Students.

Appendix D. Slides of Williams Hall Wesley College, Dover, Delaware

The numbers are those that appear on the enclosed selected slides. The sketches following show were slides 1-16 were taken.

- 1-3. Front views of Williams Hall. Slide #1 shows scorching outside the room of origin.
 - 4. Identification plaque on front of Williams Hall.
 - 5. Alarm bell and pull station in basement hallway.
 - 6. Close-up of pull station in basement hallway.
 - 7. Top of stairs on fire floor looking toward corridor <u>south</u> end. Note heat damage on top half of doors at both ends of the corridor (slides 7 & 8).
 - 8. Top of stairs on fire floor looking toward corridor north end.
- 9-14. Room of origin (room # 206).
 - 13. A close-up of the point of origin and the warped door frame due to intense heat.
 - 14. Note the similarity of the area of origin with the area on the wall where a cabinet was.
 - 15. Corridor facing south toward room of origin.
 - 16. Burned wall and ceiling fixtures 12 inches distant from room of origin.
 - 23. Undetermined, similiar to room of origin. Injured student in room 217 was found under the desk area.
 - 26. Missing fire alarm bell on 1st floor opposite room #108.
 - 27. Fire extinguisher not used.
 - 28. 1st floor corridor.
 - 29. Resident assistant office area located at main entrance to dormitory.
 - 30. Close-up missing alarm and bell, 1st floor.
 - 31. Stairwell door opposite room #220.

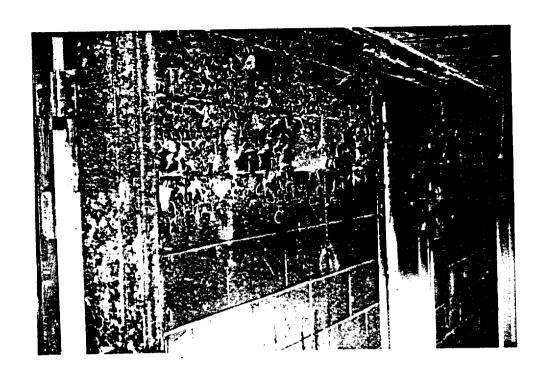
- 32. Student room door with self locking door knob.
- 33. X-rated message on ceiling of 3rd floor. Appears to be written using candle. This is an example of similar "slogans" throughout the dormitory on walls and ceilings, using candles and lighter fluid.
- 34. Close up of wall light with apparent burn marks from vandalism.
- 35. Examples of complete disregard for fire safety found throughout the building.
- 36. 2nd floor window outside room of origin.

Appendix E. Pictures of Wesley College Fire

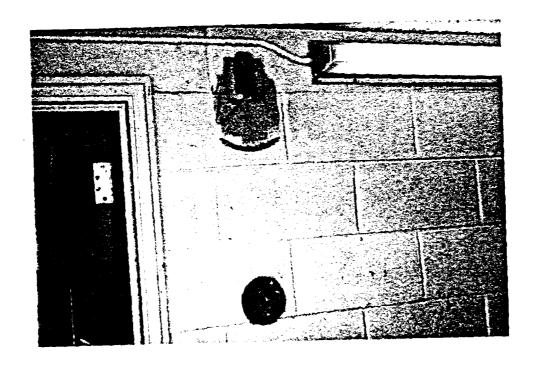
- 1. Front of Williams Hall; deceptively light looking smoke damage is seen above room of origin window at right on second level.
- 2. Damage in corner of room of origin. Note that room (in right of photo) across the hallway from the room of origin is relatively undamaged because its door was closed.
- 3. Hallway damage immediately outside the room of origin. Ceiling damage is also visible. The fire was extremely hot.
- 4. Long shot down hallway outside the room of origin. The student who was killed was in a room at the far end of the hallway.
- 5. The alarm and bell were missing on the first floor at the time of the fire.
- 6. Light fixture in a hallway on another floor of the dorm had been damaged by an open flame; there were several signs of previous minor vandalism caused by open flames.

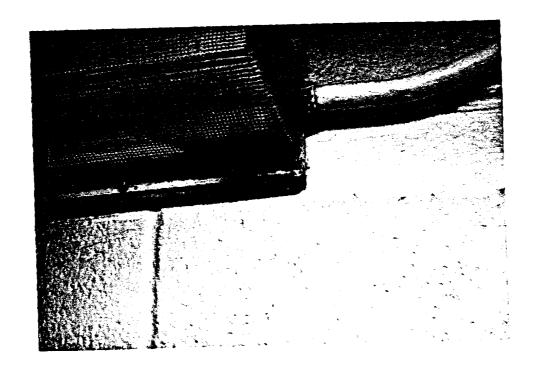












LONGWOOD COLLEGE DORMITORY FIRE

Farmville, Virginia, APRIL 28, 1987

Investigated by: Dan J. Carpenter

Local Contacts: Virginia State Fire

Marshal Office:

Longwood College, Farmville,

Virginia:

Daniel Alterescu Deputy Fire Marshal

Jim Reed

Fire Protection Engineer 205 N. 4th Street

Richmond, VA 23219 (703) 786-4751

Richard V. Hurley, VP Bus. Affairs

(804) 392-9225

Sue A. Saunders, Ph.D., Dean of Students (804) 392-9221 Richard A. Weibl, Director of

Housing (804) 392-9233

Randy L. Dean, Resident Education Coordinator (804) 392-9374 Sgt. J. A. Huskey, Campus Police Investigator (804) 392-9321, -9223

Melvin Moore, Physical Plant Supvr. Bill Brown, Prev. Maintenance Supvr.

Introduction

On the morning of Tuesday, April 28, 1987, at approximately 6:50 am, a fire started on the third floor of the Frazer Dormitory on the campus of Longwood College in Farmville, Virginia and caused fifteen students to be treated for injuries. Of these, 12 were treated for smoke inhalation, one for second- and third-degree burns, one for a broken ankle and one for severe respiratory problems partially caused by a previous illness.

The information contained in this report is based on personal observations and interviews with the persons whose names appear above. In addition, bits and pieces were gathered from others who were at the scene during the fire. Farmville Volunteer Fire Department Chief Philip Gay and Virginia State Police Investigating Officer, Roy Kyle were not available for interview during this investigation, and no incident reports were available from the fire department.

THE FIRE

On the morning of the fire, at approximately 7 AM, "heavy smoke and orange flames" were observed by Morris Walker, boiler plant employee, coming from the third floor corner window of Frazer Dormitory. Subsequently, several telephone calls were received by the Campus Police dispatcher who in turn called the Farmville Police and the Farmville Volunteer Fire Department.

According to several members of the faculty, the fire was first observed in the room of origin by a student occupant of the room, Garland Barr, who was awakened up by the fire. Mr. Barr stated that the stereo speaker appeared to burst into flames. While he was trying to put the "stereo fire" out, the fire spread to tie-dyed sheets which had been hung in the middle of the room for decoration and to provide the occupants with additional privacy. Deputy State Fire Marshal Jim Reed stated that "the probable cause of the fire was an overloaded light-duty 8-foot long, 6-outlet electrical extension cord, which was not approved." The stereo was plugged into that cord. In addition, it appeared that knots had been tied in the cord for no apparent reason, but it was not exactly clear how and why the fire started.

As the fire continued to spread, the dormitory hall fire alarm was pulled by a student but failed to operate. It was later determined that the alarm system did not activate because the main breaker switch for the alarm system (in the basement) was in the "off" position. It was finally activated manually by a dormitory Resident Assistant approximately 10 minutes after the fire was discovered. In addition, a follow up inspection revealed that approximately 85 percent of the smoke detectors in student rooms were either disconnected or failed to operate. The detector in the room of origin also apparently did not work.

Students who became aware of the fire began knocking on doors to alert other students, who thought it was "just another fire drill." Several students ignored even the vocal alarms until an announcement was made over the P.A. system that "this is not a joke, this is a real fire."

As students exited the third floor down the stairs, large quantities of smoke and hot gases which had been accumulating on the third floor entered the stairwell. Several exiting students suffered smoke inhalation.

The campus police who were first notified and first to arrive had no fire fighting protective gear, no breathing apparatus, no fire fighting training. They could not fight the fire or undertake rescue in the situation found.

Upon arrival of the first fire department unit, students were still exiting the building. The first arriving firefighters delayed their entry into the building to assist in the evacuation. Entry to the fire floor was not made immediately because the response to another fire shortly before had depleted their supply of air pacs and severely limited breathing equipment. Upon arrival of the aerial ladder truck (purchased by Longwood College for use of the fire department to reach high rise buildings), its breathing equipment with full air pacs was used and entry made.

The fire was controlled from spreading to upper floors by an outside attack using the aerial ladder and handlines stretched via ground ladders up to the canopy over the entrance. Only minimal interior fire fighting was apparently accomplished, except for extinguishing spot fires during overhaul.

Structural damage was primarily limited to the room of origin. The fire resistant construction and firefighting operations were apparently sufficient to curtail flame spread. No dollar estimate of property loss is available at this time.

THE CONSTRUCTION

Frazer Dormitory is a ten-story, fire resistant building with a basement, brick exterior, and concrete block interior. It was built in 1970 before many of the fire protection requirements of today were mandatory. There were no sprinklers.

Doors to the student rooms were not self-closing. Locks varied in type and could not be opened by a master key.

As a result of the fire, several recommendations were to be made by the Virginia State Fire Marshal's office to improve the building. However, the most recent fire code was adopted in 1984, and strict adherence to current codes cannot be mandated by current Virginia State law.

LESSONS LEARNED AND RECOMMENDATIONS

As in many schools, the basic Longwood College safety policies appeared to be sound, but the process needed to insure compliance was fragmented and in need of improvement. The problem is not a lack of concern on the part of the school or its employees, but rather a lack of knowledge or authority to carry out the functions needed to obtain compliance by students and faculty.

Members of the faculty and staff at Longwood were exceptionally cooperative with this investigation. Their realization of the potential disaster which could have resulted at the college has made them keenly aware of the circumstances surrounding the fire and the need for improvements..

Lessons learned and recommendations are listed below. The intent here is to help other schools and fire officials also learn from this fire.

1. Because of the high incidence of false alarms in dormitories, many schools such as Longwood have the policy that someone -- often a resident assistant -- is to check on whether an "emergency" is real before calling authorities. Often the first authority called for emergencies is the campus police. These actions can delay contacting the fire department when there really is a fire, as happened in these two fires.

When an actual fire is detected the first call should be to the 911 emergency number. Campus Police and other agencies may then be notified as required. (911 Alert cards have been recommended to be placed at each telephone in the Longwood dormitory.)

According to Longwood Campus Police Chief Jim Huskey, the campus police department at Longwood is normally alerted by the Residence Education Coordinator or duty resident assistant of fires or other emergencies on campus. The dispatcher notifies the officer on duty who then responds to the location of the emergency. Upon their arrival, they take whatever action they deem necessary to control the situation. This includes deciding whether or not to call the fire department. This is satisfactory unless a real fire is known to exist. The campus police, like industrial fire brigades, may be the first to arrive at the scene of a fire on campus, but the fire department should also be called.

- 2. Where campus police are to be the first responding agency called to control a fire situation, as at Longwood, they need to be adequately staffed and properly trained and equipped to enter a burning, smoke-filled building. Protective clothing, breathing equipment, and fire extinguishers need to be kept in their vehicles. They also must be trained on when and under what circumstances the fire department will be called.
- 3. The campus police depend on students to complement their numbers. A sufficient number of auxiliary student police should be recruited to insure adequate first response manpower at all times. Basic fire brigade training should be given at the beginning of each semester to Campus Police officers and the auxiliary student police.
- 4. Fire safety training for Residential Education Coordinators, Residential Assistants, and students should be given at the beginning of each school year. Follow-up training would also be beneficial. This training should include instructions on the use of the 911 emergency number.
- 5. Doors were not self-closing. They should be. This could have helped contain fire and smoke in the room of origin.
- 6. Access to student rooms must be made quickly in an emergency to see if they are occupied and if anyone is injured or needs assistance to evacuate. The variety of individual door locks at Longwood necessitated a large ring of keys to be maintained and locked in the first floor Resident

Education Coordinator's office. Consequently the keys were not used to open any of the students' rooms to ascertain that all rooms had been evacuated. The door locks should be changed, perhaps during summer break, and a lock box kept on each floor for access by that floor's RA during an emergency.

- 7. Bed linens and other flimsy combustible materials were the probable cause of the rapid spread of this fire. Hanging bed linens as room dividers appeared to be a frequent practice throughout the dormitory. This should be forbidden. Occasional unannounced room inspections might be used to check on compliance and other safety practices. The forbidden practices and equipment (e.g. the 6-outlet extension cord) should be stressed in fire safety training and literature provided to the students.
- 8. Exit doors leading to the roof were locked at the time the fire occurred, thereby preventing egress. Panic hardware with an automatic alarm would allow egress in an emergency but prevent unauthorized personnel from using this exit. Breakaway locks and/or keys should be readily available.
- 9. Fire hose and cabinets adjacent to the riser were removed after the fire, because the 1 1/2" fire hose was not equipped with a 2 1/2" adapter. These should be replaced, equipped with compatible hardware, and locked.
- 10. Access to the front of Frazer Hall by ladders was obstructed by overhanging porches and a low electrical power line. The lack of a driveway at the rear of the building could also impede the arrival of fire apparatus attempting to gain access from that side of the building. Such features should be considered in design reviews of new buildings. Pre-fire plans should be made to cope with them if they already exist. They can also be part of the argument to retrofit sprinklers in such high-use residential structures.
- 11. Corridor walls in the dormitory were breached with 2" to 3" holes to allow for a TV cable to be put in each room. No attempt to plug these

holes had been made. Such breaches should be corrected immediately using appropriate sealing methods. They can allow smoke and flames to spread.

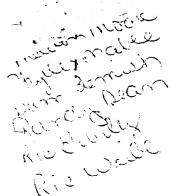
- 12. Buildings and facilities of this type should receive at least annual inspection by the State Fire Marshal's office and more frequently by college staff. (Longwood dormitory was scheduled for inspections once every three years.)
- 13. Ventilation of buildings during a fire should be accomplished by fire department personnel only. This operation must be done systematically to prevent additional smoke damage and possible spread of the fire. During this fire, it was accomplished by one of the Physical Plant personnel.
- 14. Sprinkler systems could have extinguished this fire before it caused any injuries. They should be installed in all residences.
- 15. Smoke detectors should be regularly tested and maintained in working order. Dormitory alarm systems also must be regularly checked, especially to ensure they have not been vandalized.

The most difficult task to implement is changing attitudes of students and school officials to take the threat of fire seriously. For at least a while, Longwood College will have the proper motivation. Other colleges and universities should consider these lessons for themselves. These situations are common to many.

Appendices

Longwood College, Farmville, Virginia

- A. Longwood College Campus Police Incident Report and Farmville Fire Department Incident Report.
- B. Frazer Hall Residence Hall Fire Safety Procedures.
- C. Pictures of Longwood College fire.
- D. Slides of Longwood College fire, with sketches of where slides were taken.
- E. Xeroxes of additional fire photos (USFA) master file copy only).
- F. Report from Longwood College Internal Investigation on status of fire alarms before the fire (file copy only).



ASSTRACT OF POLICE REPORT LONGWOOD CAMPUS POLICE FARMVILLE, VIRGINIA 23901

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FARMVILLE VOLUNTEER FIRE DEPARTMENT

| Attendance | P/V | FIRE REPORT | | | | | |
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| 2.1 (17/les | | Date | | | | | |
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| 4 Phillip Buildy | | 31 32 33 34 35 36 38 | | | | | |
| 5 Mal Mills | | Time Out 7:10 7:06 7:07 7:00 7:09 | | | | | |
| 6. Billy Johnson | 21, | Time On Scene | | | | | |
| 7. Juny True | 34 | Time Out Of Service 9:32 9:33 9:39 9:30 | | | | | |
| | | Time Out Of Service 9:32 9:33 9:35 9:30 | | | | | |
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| 12. T.J. Ester | | | | | | | |
| 13. E. Ross | | Type of Incident or FireBrush or FieldStructureOth | | | | | |
| 14. Chuswamen | | (Explain) | | | | | |
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| 16. Your orkins | | Cause of Incident or Fire Under investigation by State | | | | | |
| 17. Bully Ward | | | | | | | |
| 18. Chief Day | | Occupant Students | | | | | |
| 19. C/Chr. | | • | | | | | |
| 20-ROJUTE LICHARDS | | Address Telephone No | | | | | |
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| 23. | | Estimate of Damage | | | | | |
| 24 | | Vehicle Year Make Model | | | | | |
| 25. | - | License Number | | | | | |
| 26. | | Officer Answering Alarm Sief Jay | | | | | |
| 27 | | Officer in Charge | | | | | |
| 28. | | Apparatus Used = 3/ = 32 = = 34 = 38 = = 33 | | | | | |
| 29. | | Equipment Used Water Light, Cake | | | | | |
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| 32. | | Description of Incident (action taken to control) | | | | | |
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Appendix B. Frazer Hall - Residence Hall Fire Safety Procedures

(The procedures below are printed on a bright orange, 4 by 6-inch sticker.)

RESIDENCE HALL FIRE SAFETY PROCEDURES

- 1. When a fire alarm sounds you Must evacuate the residence hall. Failure to evacuate may be hazardous to your health and result in disciplinary action.
- 2. Check the door of your room/suite:
 - a. If cool, proceed with evacuation.
 - b. If warm, open door slowly to see if it is safe to exit.
 - c. If hot, DO NOT open. Stand near window and wait for help.
- 3. Exit room, closing but not locking the door. Take your keys with you. Always wear shoes and protective clothing.
- 4. Go to closest exit, enter stairwell and leave the building as quickly as possible. DO NOT attempt to use the elevator.
- 5. Re-enter the building only when directed to do so by either a residence hall staff member or Campus Police officer.

Tampering with fire safety equipment, alarms, smoke detectors, and this notice is a violation of College policy and State law.

Appendix C. Pictures of Longwood College Fire

- 1. First handline on the fire. Note campus police with no protective clothing.
- 2,3. Ladder truck in action.
- 4,5. Room of origin.
 - 6. Nearby dormitory room for comparison.

